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ABSTRACT

How 3,741 certified pre-service teacher graduates viewed their preparation at Tennessee Technological University was examined. For 21 years the university has used an evaluation model with extensive follow-up data on graduates. A profile analysis of the subjects from 1965 to 1986 was retrospectively conducted. Using a 5-point rating scale, graduates expressed satisfaction with knowledge and skills resulting from their preparation. Earlier graduates felt that they were more unprepared in discipline and guidance skills and in teaching exceptional children than were their successors. This perception was partially explained by programs implemented over the period. The data showed that the perceptions of graduates of the earlier years mirrored the directions in which teacher education programs are currently moving. (SLD)

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A SCORE PLUS ONE YEAR OF GRADUATES' PERCEPTIONS OF THEIR TEACHER EDUCATION PROGRAM

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Abstract

How do teacher education programs know if they are effectively preparing teachers? NCATE, as well as other legislative mandates, has caused many teacher education programs to document evidence of a quality teacher preparation program. The need to develop systematic followup procedures on teacher candidates and graduates is vitally important.

For twenty-one years, the Teacher Program at Tennessee Technological University has developed and employed an evaluation model with extensive follow-up data on its graduates.

This study examined how 3,741 certified teacher graduates viewed their preparation at the university. Using a 5-point rating scale, the participants expressed their satisfaction/dissatisfaction of the knowledge, skills, and understanding to perform competently as a teacher.

The data findings revealed that earlier graduates felt more unprepared to teach handicapped, discipline, and diverse students than their successors. This differential perception was partially due to contemporary trends that were later implemented. Significantly, the data showed graduates' perceptions 21 years ago mirrored future directions that teacher education programs are currently undergoing.

A SCORE PLUS ONE YEAR OF GRADUATES' PERCEPTIONS OF
THEIR TEACHER EDUCATION PROGRAM

Introduction

One of the most important facets of any teacher education program is the teacher candidate who enters and exits the program. Because it is through these programs that quality teaching is effectuated, there appears to be two primary concerns about the program effects: (1) What happens to teacher candidates after they enter a preparation program, and (2) What measurable effects does the program have on teacher candidates after they exit a preparation program?

In a decade where the perceptions of education and teaching have been negatively viewed, teacher education programs have not been exempt from harsh criticisms of inadequately preparing teachers. A major criticism has been students who enter and graduate from these programs are of a low academic calibre, compared to the high academic achievement of non-education majors (Andrew, 1983; Schlechty & Vance, 1983; Nelli, 1984; Cohen, 1984; Book et al., 1985).

Literature Review

A number of research studies have sought to identify personal and academic characteristics of teacher candidates and graduates. These examined personal characteristics have included personality, perceptions and attitudes, motivational, aspirational, and background factors (Elmore and Ellett, 1978; Villeme et al., 1982; Nelli & Atwood, 1986). Studies by Elmore & Ellett (1978) and Mundel-Atherstone (1980) have found personal factors to be significantly related to student teaching success.

Examined academic factors of teacher candidates have generally included standardized aptitude and achievement scores, G. P. A.'s, and proficiency scores (Nelli, 1984; Villeme & Hall, 1984; Fisher & Feldmann, 1985).

Although it has been frequently difficult to use some of the personal and academic factors to accurately predict teaching success, some significant findings have emerged from the research efforts. Teacher programs have been able to improve their strategies for recruiting, selecting, and retaining the best teachers. What we know very little about, however, is identifying program courses and methods that strongly influence personal and academic factors. What seems to also be missing from the literature is sufficient knowledge of candidates' incremental growth throughout various phases of their preparation training. If positive behavioral changes are occurring, it is still unclear as to how and when the changes are occurring in one's program. Moreover, Nelli and Atwood (1986) assert there is insufficient knowledge as to whether or not personality factors change as candidates exit their program and move into teaching.

The other primary concern in teacher education is the program effects on candidates as they enter and exit. What happens to teacher candidates after they enter their preparation program? More important, after they begin their teaching careers, do they perform effectively as a result of the learning experiences from education programs? It is through the curricular program that teacher education has tried to effectuate for quality teaching. Yet, some critics of traditional teacher programs have been quick to point out the programs are inept and too diluted for teacher candidates (Zeichner, 1983; Evertson et al., 1985; Murray, 1986).

In response to these harsh criticisms, teacher education has focused on trying to define, identify, and develop the type of program that adequately

prepares quality teachers. In reviewing the literature, it is evident that some revolutionary changes have taken place. Many teacher programs have been redesigned. Not only have stringent admisssion and graduation standards been raised, but some four-year programs have been extended to a fifth year as well. In some cases, the extended preparation year entails an induction, intern, or a master program that enables beginning teachers to gain additional professional training and support. Rather than implementing the post-baccalaureate concept, some teacher programs have simply adopted integrated clinical laboratory and field experience models.

Based on research findings of these innovative programs, there is strong evidence that the program changes have made some differences with teacher graduates' classroom performances (Henry, 1982; Haberman, 1984; Lasley, 1986; Zaharias & Frew, 1987). It is also clear from the literature that because a number of experimental teacher programs do exist, there are some ambiguities about the type of curricular framework needed for teacher programs. These program ambiguities have resulted in a number of reform controversies among some groups of educators. For example, proposed teacher preparation models from the Holmes Group (1986) and Carnegie Forum (1986) remain in conflict with teacher educators' perspective of a quality teacher education program. The major differences seem to lie with present practices and purposes of teacher education (Howey & Zimpher, 1986; Nussel, 1986; Smith, 1986).

In the meantime, as the proposed teacher prepartation models continue to be debated, teacher programs are still faced with providing some empirical evidence of quality program effects on teacher graduates. How do the schools of education know if they have successfully influenced teaching performances and careers of their graduates? Until recently, very few teacher programs were able to provide documented answers to this question. However, because

of the redesigned standards adopted in 1986 by the National Council for Accreditation of Teacher Education (NCATE), teacher preparation programs must provide more documented evidence of ongoing program evaluations. Part of the redesign includes a number of preconditions that must be met to determine accreditation eligibility. One of the determinants is evidence of follow-up studies of teacher graduates. This precondition standard has presented major challenges for some teacher education programs. One reason is very few schools of education have conducted extensive follow-up studies. Another reason is research on preservice and inservice education is far from being replete. Moreover, because evaluation models for teacher education are still in their infancy, the few paradigms that exist are largely designed for large institutions with available resources to adequately evaluate program effects on graduates. As a result, some small institutions frequently have to forego accreditation.

A Center for Teacher Education Evaluation Established in Tennessee

Recognizing critical evaluation needs of teacher education programs, Tennessee Technological University developed a proposal for a Center for Teacher Education Evaluation. Based on the teacher education evaluation model that was developed in 1970 and implemented in 1973, the proposal articulated a greater need not only to evaluate the purposes of teacher education, but to facilitate other teacher programs with improvements as well.

Therefore, in 1986 such a Center was approved and funded by the Tennessee Higher Education Commission (THEC). Because of the institution's historical background with the inception of its 1965 Follow-up Model and its 1970 Longitudinal Model for systematically evaluating program effects on teacher graduates, the Center has served as a viable resource for other

schools of education. It has meant further development and improvement of its original 1975 Evaluation Model. Parentetically, it has meant other evaluation models for preservice and inservice education can be examined for their practical and systematic applicability for all schools of education.

Problem and Purpose of Study

Since 1965, the teacher education program at Tennessee Tech. has conducted extensive follow-up studies of its teacher graduates. It is also one of the few teacher programs that has a longitudinal data base. These follow-up efforts were subsequently followed by the development and implementation of an evaluation model for their teacher education program. As a result, the institution has been frequently cited an an exemplar of teacher program evaluation efforts (American Association of State Colleges and Univerities, 1985; Koehler, 1985; Nelli & Nutter, 1985).

However, Koehler (1985) observed that although the teacher program has an extensive follow-up data base with classroom observations, it is difficult to attribute teacher's behaviors, attitudes, and/or beliefs to the teacher program. She further asserts that previous follow-up studies at Tenn. Tech., Ohio State, and Indiana stated more about practicing teachers than the quality effects of the preservice programs. Conversely, according to McClelland (1978), achievement motivation and performance are strongly dependent on personal attitudes of a standard of excellence. With this premise in mind, it appears that this standard of excellence for teacher candidates and graduates can be determined by how they perceive the program to be contributing to their educational needs and interests as teachers. An integral part of any evaluation of teacher preparation should be the input of the

people for whom the program was designed.

The purposes of this study were threefold: (1) examine twenty-one years of teacher graduates' perceptions and attitudes of their preparation program; (2) determine significant differences between the various groups, and (3) possibly draw inferences about the program effects on their teaching careers. Six research questions that related to graduates' perceptions and attitudes of their teacher education program guided the study.

Instrumentation Background

Questionnaire surveys that were initially employed were designed and patterned after an instrument developed by Bledsoe, Cox, and Burham (1967). These survey instruments were designed to assess data from 1965-72 teacher graduates (bachelor, master, ed.specialist) and their principals. The designed instrument consisted of three sections: (1) general personal and professional data, and (2)a 5-point Likert-type rating scale (satisfaction and dissatisfaction levels) for various aspects of their teacher preparation program. The third section assessed teaching experiences with open-ended questions and three-point rating scales (none to much) for teaching support services; most difficult professional areas as a teacher, and curricular areas that should be added to the preparation programs.

The survey instruments were subsequently modified and redesigned approximately three times to reflect program changes. In addition, a longitudinal follow-up model was developed in 1970 and implemented in 1973 for the primary purpose of using separate studies to follow up sampled teacher graduates up to five years. The undertakings of these studies were divided into several phases. Each graduating year, a distinct group was added to this longitudinal study while the other follow-up studies of annual graduates continued.

Thus, revised, developed, and standardized questionnaire instruments were used to assess data about their completed teacher preparation program in relationship to influential attainment factors, professional experiences as teachers, and personality and academic measurements. In addition, these instruments were used to assess data from their principals, supervisors, and students. Since the longitudinal studies examined relationships between selected variables, the results were not reported in this study. Parenthetically, classroom observations followed the surveys, but not reported in this study.

Methodology

A profile analysis of 3,741 certified preservice teacher graduates from 1965-1986 was retrospectively examined. A large percentage of the graduates taught grades 7-9 (23%) and 1-3 (21%). The perceptions and attitudes of their teacher program and the effects on their teaching careers were compared over a 21-year period. Moreover, demographic and occupational factors were observed. To simplify the comparative data, four interval periods were employed: (1) 1965-69; (2) 1970-74; (3) 1975-80, and (4) 1981-86.

Using a 5-point rating scale, the participants had been asked to evaluate the satisfaction/dissatisfaction levels(1-5) in which their preparation program provided the essential knowledge, skills, and understanding to competently perform as a teacher. Moreover, graduates had been asked to evaluate various teacher preparation experiences, as well as an evaluation of courses that should be removed from the teacher curriculum. Teacher graduates from 1965-1972 were asked to evaluate more areas of their teaching and support services and sources than their graduate successors. These graduates were to rate each area using a 3-point rating scale (1=none,

2=some, 3=much). All teacher graduate groups were asked to evaluate the quality of instruction in the college of education. Some of the graduate groups were asked to evaluate their knowledge and understanding of perceived skills from the program in relationship to the teacher and/or university's influence of these attainments.

Data Analyses and Results

The data were examined using comparative data reports of percentage rates, mean rating scores, and differential scores between perceived skill levels and the program's contribution to the attainment of knowledge and skills. To further analyze the data, one-way analysis of variance (ANOVA) was employed to determine any significant rating differences between some of the groups. Instrumentation redesigns with various graduate groups contributed to reasons for not testing significant differences for all the groups' perceptions and atttitudes. The level of significance was set at .05.

While most of the teacher graduates did enter the teaching force, there were graduates who had other occupations. Some of these elected occupations suggest they are aligned with social, political, and economical shifts during the graduate eras. Of the 1965-69 non-teaching graduate group, 39% of them were homemaking, while 11% were in the military. Another 26% had other jobs. In subsequent years, homemaking and military occupational trends tended to diminish as low as 2%. By 1979, the percentage of teacher graduates continuing their education increased. Percentage rates for graduate work persisted throughout the 80s.

1965-69

The first interval assessment period (1965-69) consisted of 523 volunteered teacher graduates who were between the ages of 20-29 (97.8%). Approximately 33 percent were males and 67 percent were females. A large percentage (47.6%) of the graduates were certified in secondary education. While 324 teacher graduates planned to teach the ensuing year, 156 did not plan to teach. Of those not planning to teach, the primary reasons were homemaking, continuing education, and military services.

A profile analysis of the perceptions and attitudes of the teacher education program from the 1965-69 graduates varied. The preparational areas the graduates were not very satisfied with were the knowledge of the physical and biological sciences and mathematics. Yet, it was interesting to find that over 68 percent of the elementary majors saw the need for an additional science course and methods course in language arts, while 85 percent wanted an additional teaching course in reading. A large percentage (49.3%) were very satisfied with the teaching knowledge of their subject, but they felt they lacked the preparational competencies in discipline, guidance, and with exceptional children. Moreover, providing different learning experiences for diverse students, as well as motivating and evaluating students, were frequently rated low.

When the teacher graduates were asked to evaluate 19 program courses, consistent findings were found with elementary, secondary, physical ed., and music majors. The courses that consistently received the poorest ratings (1-3) were: (1) Introduction to Teaching, (2) Social Foundations of Education, and (3) History and Philosophy of Education. While a large percentage (65.1%) tended to be very satisfied with their student teaching experience, elementary majors (29%) were less satisfied with their major curriculum courses than secondary (55%) and health, physical ed., and

music majors (67%). Approximately 80 percent of all the participants saw the need for additional micro-teaching experiences, as well as field experiences to work directly with children prior to student teaching.

According to some of the teacher graduates (48%), the quality of instruction in their major teaching field was satisfactory, while 32 percent rated the instruction unsatisfactory. When the participants were asked to rate support services in various teaching capacities, the dominant areas were with preparing and maintaing records and reports, as well as handling disciplinary problems. A large percentage (48%) said they received no assistance with planning for and working with gifted and retarded children. The people who seemed to provide much of the support were their teacher colleagues, while they saw visiting teacher (71%) and the university personnel (62%) provided no support. The most difficult areas in teaching were motivating disinterested students and evaluating student learning. However, only 3.6 percent of the graduates were very dissatisfied with the teaching profession.

1970-74

Between 1970 and 1974, some consistent findings were found with the teacher graduates' perceptions of their education program. It was generally found that the graduates were satisfied with some aspects of their teacher program. However, some consistent dissatisfaction findings are worth mentioning to point out how the assessments have led to subsequent program improvements.

What was observed was the satisfaction levels with knowledge and understanding of liberal arts and general education courses, learning theories, teaching methods, and classroom motivation and management. In areas where

low ratings tended to increase, high satisfaction levels tended to decrease for consectutive years. For example, for five consecutive years, the percentage rates of high satisfaction levels (4-5) decreased with physical science, while percentage rates for dissatisfaction levels (1-2) increased. Similarly, this rating pattern was observed with some other liberal art courses: mathematics, art, music, literature, and philosophy. While the graduates tended to be highly satisfied with the knowledge and understanding of their subject, there were other aspects of general education courses in which they were dissatisfied. Very few of the 1970-74 graduates felt competent in working with exceptional children. Over the five years, only 10.7 percent were highly satified with this competency. Another consistent dissatified finding was with discipline competency. The dissatisfaction percentage ratings increased from 8.1% to 15.1% by 1974. Similarly, this increased dissatisfaction rating was noted with instructional methods for various groups and individuals. Only 19.7% or these graduates felt competent with this skill.

When the 1970-74 graduates were asked to rate the value of various program courses, consistent findings were found with elementary, secondary, physical education, health, and music majors. These courses (Intro. to Teaching, Social Foundations and Philosophy of Ed.) tended to receive low ratings (1-3). It was interesting to consistently find that for eight years (1973-80), these two courses received the lowest mean ratings (2.7 and 2.9). Conversely, the perceived value of methods courses(4.2), microteaching (4.1), and student teaching (4.6) was rated highest for eight years.

1975-80

For the 1975-80 period, the survey instruments were slightly revised to reflect program changes from previous years, as well as changes with the follow-up model.

A profile analysis of these results indicated the perceptions and attitudes of 1975-80 graduates differed from the previous graduates. While the satisfaction levels for science and math competencies remained constant (3.7-3.8 mean ratings) for three years, the mean ratings increased (4.0-4.3) the last three years. Perhaps, the increased satisfactory rating reflected the shift back to more emphasis on math and science in education. Similarly, this rating pattern was found with the humanities and social sciences. Comparatively, previous graduate groups did not feel competent to work with exceptional children; however, 1975-80 graduates did. This subsequent satisfaction rating change was perhaps due to the program changes with more special education requirements for education majors. The increased satisfaction mean ratings (3.4-4.0) with this group reflected this program change and improvement.

From the eight courses that were rated low to high (1-5), consistent high mean ratings were observed with method courses (3.8-4.6), micro-teaching (3.8-4.3), and student teaching (4.4-4.9). On the other hand, Introduction to Teaching (3.0-3.3) and Social Foundations of Education (2.7-3.1) received the lowest mean ratings. It was interesting to find for eight years (1973-80), these two courses recieved the lowest mean ratings (2.7 and 2.9). Conversely, the perceived value of methods courses (4.2), micro-teaching (4.1), and student teaching (4.6) was rated highest for eight years. (See Table I.)

TABLE I

Mean Ratings of the Overall Value of Certain Courses in the Teacher Preparation Program of the University as Rated by 1973-80 Graduates

Courses	1973	1974	1975	1976	1977	1978	1979	1980	1973-80
Introduction to Teaching	3.1	2.4	3.1	3.0	3.0	3.2	3.2	3.3	2.7
General Psychology	4.3	3.5	3.7	3.8	3.5	3.7	3.7	3.7	3.7
Human Growth and Development	4.4	4.2	3.9	3.7	3.4	3.7	4.1	4.0	3.9
Educational Psychology	3.9	3.9	3.8	3.3	3.3	3.5	3.7	3.7	3.7
Social Foundations of Education	3.1	2.8	2.9	2.8	2.7	3.1	3.0	3.1	2.9
History and Philosophy of Education	3.2	3.2	3.5	3.2	3.1	3.1	3.1	3.5	3.2
Evaluation and Guidance	3.6	3.7	2.7	3.9	3.8	3.7	3.9	3.7	3.6
Methods Courses	4.1	4.1	4.5	3.9	3.8	4.5	4.6	4.3	4.2
Micro-Teaching	4.4	4.1	3.8	3.8	4.1	4.2	4.3	3.8	4.1
Student Teaching	4.4	4.5	4.6	4.5	4.4	4.8	4.9	4.8	4.6

1975-80

In addition to previous findings, 1978-80 graduate groups were asked to rate the major aspects of the teacher program in three ways: (1) perceived level of skill or understanding, (2) importance or relevance of each teaching aspect, and (3) overall rating of teacher's contribution for skill and understanding attainments. Each area was rated on a 1-5 scale ranging from very unsatisfactory or unimportant to very satisfactory or important. As Table II shows the mean ratings for teacher's contribution to attainment were lower than course importance. However, it is questionable as to how the graduates attained the understanding when teacher's contribution was not perceived as highly satisfactory.

This particular group was also asked to rate a series of common courses in relationship to 4 areas: (1) content of course as essential to be a good teacher, (2) content of course as presented in a satisfactory manner, (3) importance of required course for all prospective teachers, and (4) overall value of course. Table III shows a tremendous amount of similarities with previous findings of dissatisfied courses. The table also presents a better picture as to possible reasons why all the groups rated Intro. to Teaching, Social Foundations, and History and Philosophy of Education consistently low. The content, presentation, and importance of the courses received low mean ratings. The overall importance of these courses was the lowest compared to other program courses. As previously found also, methods courses, micro and student teaching were perceived to be the most valuable than other courses.

1981-86

For 1981-86, the teacher graduates' perceptions and attitudes of science and math did not differ from their graduate predecessors. While these courses were viewed important, the understanding and the university's

TABLE II

Mean Ratings of Various Aspects of the Teacher Preparation Program at Tennessee Tech by 1978-80 Graduates

Program Aspects	Understanding			Importance			Teacher Contribution		
	78	79	80	78	79	80	78	79	80
General knowledge/understanding									
a. Science and Mathematics	4.0	4.2	4.2	4.3	4.3	4.5	3.8	3.8	3.8
b. Humanities	4.2	4.3	4.3	4.3	4.4	4.5	3.8	3.9	3.8
c. Social Science	4.1	4.4	4.2	4.2	4.3	4.4	4.0	4.0	3.8
Ability to use the English language effectively	4.5	4.6	4.4	4.7	4.8	4.8	4.0	4.2	4.2
Knowledge/understanding of teaching subject(s)	4.7	4.7	4.6	4.9	4.9	4.9	4.3	4.5	4.3
Understanding of children/ youth									
a. Insight into behavioral causes	4.2	4.3	4.4	4.7	4.8	4.8	4.0	4.0	4.1
b. Skill with working with exceptional children (the bright, handicapped, etc.)	4.0	4.0	4.0	4.6	4.6	4.5	3.7	3.7	3.7
c. Skill in maintaining discipline	4.3	4.3	4.2	4.9	4.8	4.7	3.6	3.7	3.5
Understanding of the nature of the learning process	4.2	4.4	4.3	4.4	4.6	4.5	3.9	4.2	4.0
Knowledge of sources of teaching materials	4.3	4.2	4.2	4.7	4.6	4.7	4.3	4.2	4.1
Ability to use teaching materials	4.4	4.4	4.5	4.8	4.7	4.7	4.3	4.3	4.2

TABLE III

Mean Ratings Given by 1978-80 Graduates in Four Areas to Various Courses

Course	Content			Presentation			Importance			Overall		
	78	79	80	78	79	80	78	79	80	78	79	80
Intro. to Teaching	3.3	3.2	3.6	3.5	3.9	3.6	3.4	3.5	3.7	3.2	3.3	3.3
General Psychology	3.8	3.9	3.7	3.7	3.8	3.8	3.8	3.8	4.0	3.7	3.7	3.7
Human Growth & Development	3.8	4.1	3.9	3.7	4.0	3.8	3.9	4.1	4.0	3.7	4.1	4.0
Educational Psychology	3.7	3.8	3.7	3.3	3.7	3.5	3.8	3.8	3.7	3.5	3.7	3.7
Social Found. of Educ.	3.2	3.1	3.2	3.3	3.2	3.0	3.3	3.0	3.2	3.1	3.0	3.1
Hist. & Phil. of Educ.	3.0	3.1	3.3	3.5	3.6	3.9	3.2	3.2	3.5	3.1	3.1	3.5
Eval. & Guidance	3.9	3.9	3.7	3.5	3.4	3.5	4.0	4.0	4.0	3.7	3.9	3.7
Methods Courses	4.6	4.6	4.5	4.3	4.5	4.1	4.7	4.5	4.4	4.5	4.6	4.3
Micro-Teaching	4.1	4.3	4.0	4.0	4.3	3.7	4.1	4.4	4.0	4.2	4.3	3.8
Student Teaching	4.8	4.9	4.8	4.5	4.7	4.4	4.8	4.8	4.9	4.8	4.9	4.8

attainment influence had the lowest mean ratings, compared to other program areas. For five consecutive years (1982-86), as with previous findings, the graduates felt they lacked an understanding of how to work with exceptional children. Similarly, the mean rating patterns for the program's contribution to attainment of this skill remained the lowest compared to other influential areas. The 1981-86 graduate group also reflected an understanding of knowing how to manage discipline, but this skill was not necessarily attained from the program. The mean differential scores between perceived skill and program attainment influence in this area was as high as 1.1. Perhaps the knowledge in this area is reinforced more in actual classroom teaching settings.

As far as the overall value of courses in the teacher preparation program, the mean rating for Introduction to teaching slightly increased (3.6); however, mean ratings for Social Foundation of Education (3.0) and History and Philosophy of Education (3.2) either remained constant or slightly decreased from previous years. High mean ratings were still found for methods courses, micro and student teaching. (See Table IV for 10 years of comparative mean rating differences with program courses.)

Results of Significant Differences Between Graduate Groups

ANOVA results showed the perceived knowledge and skills from various aspects of the teacher program differed significantly between the 1978-1986 graduate groups, $F(8,135)=3.16$, $p<.01$. Similarly, the 1971-86 groups differed significantly with whether or not the university or program had influenced the attainment of the knowledge and skills, $F(8,135)=3.29$, $p<.01$. On the other hand, when 1973-77 graduate groups were asked to

TABLE IV

Mean Ratings of the Overall Value of Certain Courses in the Teacher Preparation Program of the University as Rated by 1977-1986 Graduates

	Courses	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86
a.	Introduction to Teaching	3.0	3.2	3.3	3.3	3.9	3.5	3.7	3.6	3.9	3.2
b.	General Psychology	3.5	3.7	3.7	3.7	3.9	3.4	3.4	3.6	3.7	3.6
c.	Human Growth and Dev.	3.4	3.7	4.1	4.0	3.8	3.3	3.2	3.6	3.6	3.4
d.	Educational Psychology	3.3	3.5	3.7	3.7	4.0	3.0	3.3	3.4	3.6	3.7
e.	Social Foundations of Education	2.7	3.1	3.0	3.1	3.5	2.8	2.7	2.8	3.0	3.4
f.	History and Philosophy of Education	3.1	3.1	3.1	3.5	3.4	3.3	3.3	2.9	3.2	3.3
g.	Evaluation and Guidance	3.8	3.7	3.9	3.7	3.9	3.6	3.6	3.6	3.9	3.9
h.	Methods Courses	3.8	4.5	4.6	4.3	4.6	4.4	4.7	4.6	4.6	4.5
i.	Micro Teaching	4.1	4.2	4.3	3.8	4.0	4.0	4.3	4.1	4.0	3.9
j.	Student Teaching	4.4	4.8	4.9	4.8	4.8	4.9	4.8	4.8	4.8	4.7

rate various parts of the teacher program only, there was no significant difference between the groups, $F(4,75)=2.54$, $p > .05$. With the program courses, the 1977-86 teacher graduate groups did not differ significantly with their attitudes, $F(9,91)=.572$, $p > .05$. As previously cited, there were three program courses that were consistently rated low by all graduate groups.

Discussion and Conclusions

Since the 1965 inception of follow-up data on teacher graduates of Tennessee Technological University, a number of social, political, and economical factors have had a strong impact on the way institutions of higher education should tailor their programs. Retrospectively, each decade has been characterized with reform movements that have indeed reflected in teacher education programs. Curricular programs and methods have frequently changed to meet growing demands of students and society. Thus far, the 80s have been characterized as an era of excellence in education. Teacher education programs are being held accountable for quality teaching.

Over the twenty-one years in which data were assessed from the teacher graduates, it is evident the perceptions and attitudes have reflected past and present emphases in teacher education. It is also more evident now that past assessments represented future directions for teacher education.

The teacher graduates' dissatisfactions with various aspects of their program tended to mirror educational problems and concerns within educational systems during a particular era. For example, school discipline became a major concern in the mid-70s. It was also during this era that with the passing of PL 94-142, regular teachers suddenly realized they had very little

knowledge or skills to work with exceptional children. Therefore, teacher education began to restructure the program to include classroom management skills and required hours in special education for all education majors. As the program changed, the perceptions and attitudes of the graduates slightly changed. One assumption that can be made from this finding is teacher candidates will gain more knowledge and understanding from program courses when they know specific competent performances will be expected of them as teachers. A second assumption is teacher preparation courses and methods are valued when teacher candidates can transfer and apply the knowledge and skills to their classroom settings. Micro and student teaching and field experiences seem to be vehicles for reinforcing the preparation learning. As observed, a majority of the teacher graduates were not only satisfied with these practical experiences, but they wanted more opportunities as well.

The dissatisfaction levels with liberal arts courses tended to outweigh dissatisfaction levels of general education courses. In an era of reform debates, the findings have generated two questions. Do the graduates' perceptions and attitudes toward liberal arts courses refute some of the current arguments for more liberal arts instruction for education majors? Will adding a more liberal arts curricula improve effective teaching behaviors?

Other implications from the study have suggested the need for teacher education programs to be concern with the quality of program instruction. This is an area that is generally sensitive to educators. As a result, it is frequently an area that is overlooked, because it is assumed that educators of prospective teachers can effectively teach. If the instruction is poor in teacher education, what does this say about program efforts to prepare teacher candidates for quality teaching?

Overall, the results from the study did not necessarily reveal whether or not the teacher program was good or bad. More significantly, the findings represented a gauge as to whether or not the teacher program accomplished its purposes with the teacher candidates who later became practicing teachers.

It is also obviously clear that the perceptions and attitudes of a teacher program from teacher candidates and graduates can serve as a compass for further program developments and improvements. Retrospectively, the findings have forecasted the future directions that teacher programs eventually took throughout the decades. As early as the 60s, the graduates apprised educators of the need to prepare teacher candidates to work with exceptional and multicultural children. They also articulated the need to focus on classroom management skills. Almost a decade later, these areas became a major part of teacher programs. Similarly, during the 70s the graduates projected the need for more practical experiences with teaching and working with children prior to graduating. Moreover, the graduates projected the need for beginning teachers to have more support services in the profession. Again it was almost a decade later before teacher programs fully addressed this concern.

Thus far, the graduates of the 80s are echoing another needed support from the profession. Part of the support system should include educators from their teacher education program. Since graduates have been under educators' tutelage for the preparation, perhaps extending this relationship could further enhance beginning teachers' confidence and competency. Educators who prepare teacher tend to forget some teacher candidates once they exit the program until follow-up data are needed.

Overall, it is evident that after 21 years of follow-up data on teacher graduates, the teacher education program has undergone a number of transitions. While some of these changes have stemmed from governing policies, the assessment efforts have primarily been for the sole purpose of improving the quality of the program. Continual evaluation and research efforts are needed for follow-through data on teacher candidates to determine incremental growth throughout the teacher program.

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